IN THE CLAIMS:

Please re-write the claims to read as follows:

1   1. (Currently Amended) A method for determining latency of a selected path in a com-
2   puter network having a plurality of network nodes, the computer network further includ-
3   ing a first entity disposed at one end of the selected path and a second entity disposed at a
4   second end of the selected path, the method comprising the steps of:
5   utilizing at least one path state set-up message formulated by the first entity and
6   passed to each network node along the selected path to establish a path state at each net-
7   work node along the selected path for identifying a traffic flow having predefined pa-
8   rameters; [[, and for]]
9   implementing a source routing option to include in the path state setup message,
10   the source routing option to provide a choice between strict source routing and loose
11   source routing;
12   forwarding messages matching the predefined parameters of the traffic flow to a
13   next downstream network node along the selected path;
14   generating a test message at the first entity, the test message addressed to the sec-
15   ond entity and configured in accordance with the predefined parameters of the traffic
16   flow;
17   placing a time record in the test message;
18   transmitting the test message from the first entity;
19   in response to receiving the test message at each network node, forwarding the
20   test message from the receiving network node to the next downstream network node
21   along the selected path by virtue of the previously established path states;

2

22   in response to receiving the test message at a last downstream network node along

23   the selected path, forwarding the test message to the second entity by virtue of the previ-

24   ously established path states; and

25   using the time record placed in the test message to determine the latency of the

26   selected path.

1   2. (Original) The method of claim 1 wherein the predefined parameters of the traffic flow

2   include at least a network layer address associated with the first entity and a network

3   layer address associated with the second entity.

1   3. (Previously Presented) The method of claim 2 wherein the at least one path state setup

2   message formulated at the first entity is addressed to the second entity and includes:

3   the predefined parameters of the traffic flow; and

4   a source routing option that lists, in sequential order, each network node along the

5   selected path; and the method further comprises the steps of:

6   in response to receiving the at least one path state setup message at each network

7   node, forwarding the at least one path state setup message from the receiving network

8   node to the next downstream network node along the selected path by virtue of the source

9   routing option; and

10   in response to receiving the at least one path state setup message at the last down-

11   stream network node along the selected path, forwarding the at least one path state setup

12   message to the second entity.

1   4. (Previously Presented) The method of claim 3 further comprising the steps of:

2   formulating at least one path state reservation message at the second entity, the at

3   least one path state reservation message addressed to the last downstream network node

4   along the selected path and including the predefined parameters of the traffic flow;

5   transmitting the at least one path state reservation message from the second entity

6   into the computer network;

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7   in response to receiving the at least one path state reservation message at each

8   network node, including the last downstream network node, (1) establishing a path state

9   corresponding to the predefined parameters of the traffic flow, and (2) sending at least

10   one corresponding path state reservation message from the receiving network node to a

11   next upstream network node;

12   in response to receiving the at least one path state reservation message at a last

13   upstream network node along the selected path, forwarding the path state setup message

14   to the first entity.

1   5. (Previously Presented) The method of claim 4 wherein the step of using the time rec-

2   ord placed in the test message comprises the steps of:

3   generating a second test message at the second entity, the second test message ad-

4   dressed to the first entity and containing the time record from the received test message;

5   transmitting the second test message from the second entity to the first entity;

6   constraining the second test message to follow the selected path in the computer

7   network;

8   upon receiving the second test message at the first entity, comparing the time rec-

9   ord with a current time to determine the latency of the selected path.

1   6. (Original) The method of claim 5 wherein the step of constraining comprises the steps

2   of establishing a second path state at each network node along the selected path for iden-

3   tifying a second traffic flow having predefined parameters, and for forwarding messages

4   matching the predefined parameters of the traffic flow to the next upstream network node

5   along the selected path, wherein

6   the second test message generated by the second entity is configured in accor-

7   dance with the predefined parameters of the second traffic flow.

1   7. (Original) The method of claim 4 wherein the step of using comprises the steps of:

2   providing a clock management facility at each of the first and second entities;

4

3   synchronizing the clock management facilities at the first and second entities;

4   upon receiving the test message at the second entity, comparing the time record

5   with a current time to determine the latency of the selected path.

1   8. (Currently Amended) A computer readable medium containing executable program

2   instructions for generating a path state setup message, the path state setup message for

3   establishing a path state at one or more network nodes along a selected path between first

4   and second entities of a computer network, the executable program instructions compris-

5   ing steps for:

6   inserting into the path state setup message a source routing option <u>indicator</u> that

7   lists one or more network nodes along the selected path; [[and]]

8   <u>implementing a source routing option in response to the source routing option in-</u>

9   <u>dicator in the path state setup message, the source routing option to provide a choice be-</u>

10   <u>tween strict source routing and loose source routing; and</u>

11   inserting into the path state setup message one or more parameters that define a

12   selected traffic flow that is to be associated with a test message for determining a latency

13   of the selected path, wherein

14   the path state setup message is generated by the first entity and passed to each of

15   the one or more network nodes along the selected path.

1   9. (Original) The computer readable medium of claim 8 comprising further program in-

2   structions for listing each of the network nodes along the selected path in the source

3   routing option.

1   10. (Original) The computer readable medium of claim 9 comprising further program in-

2   structions for rendering the path state setup message free from having a sender traffic

3   specifier.

5

1   11. (Original) The computer readable medium of claim 10 comprising further program
2   instructions for inserting into the path state setup message a router alert option.

1   12. (Original) The computer readable medium of claim 8 comprising further program in-
2   structions for rendering the path state setup message free from having a sender traffic
3   specifier.

1   13. (Previously Presented) A network node for use in a computer network, the network
2   node disposed along a selected path between first and second entities, the network node
3   comprising:
4   a plurality of interfaces configured to receive and forward messages;
5   an options processor in communicating relationship with the plurality of inter-
6   faces, the options processor configured to implement one or more options included in a
7   path state setup message received from the first entity and identifying a traffic flow; and
8   a signaling protocol processor in communicating relationship with the options
9   processor,
10   wherein the options processor and signaling protocol processor cooperate to implement a
11   source routing option included in the path state setup message by initializing a path state
12   associated with the traffic flow and forwarding the path state setup message to a next
13   network node as identified in the source routing option.

1   14. (Original) The network node of claim 13 further wherein the signaling protocol proc-
2   essor, in response to receiving a path state reservation message at the network node, es-
3   tablishes the previously initialized path state.

1   15. (Original) The network node of claim 14 wherein the path state reservation message
2   includes one or more parameters that define a selected traffic flow, the network node
3   further comprising a packet classifier operatively coupled to the signaling protocol proc-
4   essor,

5   whereby the signaling protocol processor configures the packet classifier to identify for

6   messages matching the one or more parameters of the selected traffic flow.

1   16. (Original) The network node of claim 15 further comprising a packet scheduler

2   operatively coupled to the signaling protocol processor, whereby the signaling protocol

3   processor establishes a short-cut at the packet scheduler for application to messages iden-

4   tified by packet classifier as matching the one or more parameters of the selected traffic

5   flow.

1   17. (Original) The network node of claim 16 wherein the signaling protocol processor is a

2   resource reservation protocol processor.

1   18. (Currently Amended) An apparatus for generating a path state setup message, the

2   path state setup message for establishing a path state at one or more network nodes along

3   a selected path of a computer network between first and second entities, the apparatus

4   comprising:

5   means for inserting into the path state setup message a source routing option that

6   lists one or more network nodes along the selected path; [[and]]

7   _____means for implementing a source routing option in response to the source routing

8   option indicator in the path state setup message, the source routing option to provide a

9   choice between strict source routing and loose source routing; and

10   means for inserting into the path state setup message one or more parameters that

11   define a selected traffic flow that is to be associated with a test message for determining a

12   latency of the selected path, wherein

13   the apparatus is disposed at the first entity and the path state setup message is

14   generated by and transmitted from the first entity.

1   19. (Previously Presented) An apparatus as defined in claim 18 comprising:

7

2   means for listing each of the network nodes along the selected path in the source

3 routing option.

1 20. (Previously Presented) An apparatus as defined in claim 18 comprising:

2   means for rendering the path state setup message free from having a sender traffic

3 specifier.

8

Please add new claims 21 *et seq.* as follows:

1   21. (New) A method for generating a path state at one or more network nodes along a
2   selected path of a computer network between first and second entities, the method com-
3   prising:
4   inserting, by the first entity, into a path state setup message a source routing op-
5   tion indicator that lists one or more network nodes along the selected path;
6   implementing, at the one or more network nodes, a source routing option in re-
7   sponse to the indicator in the path state setup message; and
8   inserting into the path state setup message one or more parameters that define a
9   selected traffic flow that is to be associated with a test message for determining a latency
10   of the selected path between the first entity and the second entity.

1   22. (New) An apparatus to generate a path state at one or more network nodes along a
2   selected path of a computer network between first and second entities, comprising:
3   means for inserting, by the first entity, into the path state setup message a source
4   routing option indicator that lists one or more network nodes along the selected path;
5   means for implementing, at the one or more network nodes, a source routing op-
6   tion in response to the indicator in the path state setup message; and
7   means for inserting into the path state setup message one or more parameters that
8   define a selected traffic flow that is to be associated with a test message for determining a
9   latency of the selected path between the first entity and the second entity.

1   23. (New) A method for generating a path state at one or more network nodes along a
2   selected path of a computer network between first and second entities, the method com-
3   prising:
4   inserting, by the first entity, into a path state setup message a source routing op-
5   tion indicator that lists one or more network nodes along the selected path, the routing

9

6   option indicator to implement at the one or more network nodes a source routing option

7   in response to the indicator; and

8   inserting into the path state setup message one or more parameters that define a

9   selected traffic flow that is to be associated with a test message for determining a latency

10   of the selected path between the first entity and the second entity.

1   24. (New) An apparatus to generate a path state at one or more network nodes along a

2   selected path of a computer network between first and second entities, comprising:

3   means for inserting, by the first entity, into a path state setup message a source

4   routing option indicator that lists one or more network nodes along the selected path, the

5   routing option indicator to implement at the one or more network nodes a source routing

6   option in response to the indicator; and

7   means for inserting into the path state setup message one or more parameters that

8   define a selected traffic flow that is to be associated with a test message for determining a

9   latency of the selected path between the first entity and the second entity.

1   25. (New) An apparatus to generate a path state at one or more network nodes along a

2   selected path of a computer network between first and second entities, comprising:

3   a processor in the first entity to insert into a path state setup message a source

4   routing option indicator that lists one or more network nodes along the selected path, the

5   routing option indicator to implement at the one or more network nodes a source routing

6   option in response to the indicator, and to insert in the path state setup message one or

7   more parameters that define a selected traffic flow that is to be associated with a test mes-

8   sage for determining a latency of the selected path between the first entity and the second

9   entity; and

10   an outbound communication interface to send the path state setup message onto a

11   computer network, the path state setup message addressed to the second entity.

10

1 26. (New) A method for measuring latency in a connectionless computer network, com-
2 prising:
3   selecting one or more nodes through the connectionless network to establish a two
4 way path through the connectionless network;
5   establishing the path, the path including the selected nodes, and the path including
6 additional nodes established by the connectionless network; and
7   measuring a time interval from transmission of a test packet along the path until
8 receipt of a response to the test packet, the response travelling along the path.

1 27. (New) An apparatus to measure latency in a connectionless computer network, com-
2 prising:
3   means for selecting one or more nodes through the connectionless network to es-
4 tablish a two way path through the connectionless network;
5   means for establishing the path, the path including the selected nodes, and the
6 path including additional nodes established by the connectionless network; and
7   means for measuring a time interval from transmission of a test packet along the
8 path until receipt of a response to the test packet, the response travelling along the path.

1 28. (New) An apparatus to measure latency in a connectionless computer network, com-
2 prising:
3   a processor to one or more nodes through the connectionless network to establish
4 a two way path through the connectionless network;
5   transmitting a path state setup message to establish the path, the path including the
6 selected nodes, and the path including additional nodes established by the connectionless
7 network; and
8   receiving a response to a test message to measure a time interval from transmis-
9 sion of a test packet along the path until receipt of a response to the test packet, the test
10 packet and the response travelling along the path.

11

1   29. (New) A computer readable media comprising:

2   said computer readable media containing instructions for execution in a processor

3   for the practice of the method of claim 1 or claim 21 or claim 23 or claim 26.

1   30. (New) Electromagnetic signals propagating on a computer network, comprising:

2   said electromagnetic signals carrying instructions for execution on a processor for

3   the practice of the method of claim 1 or claim 21 or claim 23 or claim 26.